













## Gas Clip Technologies Clip Dock (Bump Test and Calibration Station)

### **READ FIRST BEFORE OPERATION**

Gas Clip Technologies ("GCT") Clip Dock Bump Test and Calibration Station is designed to ensure that the Single Gas Clip and SGC Plus detectors are functioning properly and are able to detect and alarm to known target gas concentrations. Data from these tests is stored to the onboard USB memory which can be downloaded for analysis at a later time. It is your responsibility to properly use the Clip Dock.

-  Warning: The ClipDock may not support all gases. For a complete list, please contact GCT.
-  Warning: Do not use the ClipDock if it appears to be damaged. Inspect it before each use.
-  Warning: Ensure the ClipDock is used with certified calibration gas matching the suggested concentrations
-  Warning: DO NOT use expired calibration gas. Please check the expiration date located on the bottle.
-  Warning: Only operate the ClipDock in non hazardous areas with adequate ventilation.
-  Warning: Confirm that the gas cylinder contains enough gas for testing procedures before starting.
-  Warning: Do not expose the ClipDock to electrical or mechanical shocks before, during, or after use.
-  Warning: Do not allow liquids to condense and / or use high power sprays on the ClipDock.
-  Warning: Gas Clip Technologies recommends periodic back up of the data stored on the USB Memory.
-  Warning: Read the entire ClipDock manual and follow all instructions to ensure proper use and safe installation.

### Getting Started

#### Set Up/Installation instructions:

**Installation:** The Clip Dock is designed to be used on a flat surface. Each Clip Dock should come with the following:

1. Clip Dock Docking Station inside the case.
2. One (1) 3/32 Allen wrench
3. One (1) USB metal cover
4. One (1) USB memory stick \*Underneath the metal cover\*
5. One (1) Power Supply



#### 6. **Note: Calibration Gas cylinders are sold separately**

\*On opening your docking station if it does not contain the aforementioned parts please contact GCT immediately at (877)-525-0808

**Power:** The Clip Dock is powered by an internal rechargeable battery. Charge with the power cable provided.


**AC Power:** Ensure the Power LED is green, insert the units and press bump test\*

**Battery Power:** Press the bump test or calibration button to activate the station. Pressing either button will immediately initiate a test. The units should be inserted before pressing the button.

**Charging the Battery:** While charging the Unit LED lights will cycle toward the Power LED to indicate charging. Once fully charged, the Power LED will be solid green when fully charged. If the battery is low, the Power LED will blink green. A complete charge takes approximately 3 hours. A full charge lasts for approx 1000 bump test cycles or more.

**Installation of Calibration Gas:** In order to perform tests on your detectors, you will need to make sure to have a bottle of certified calibration gas installed. This section is located on the right hand side of the docking station. To install, insert the bottle and screw until tight, once properly connected you will be able to view a pressure reading in the pressure gage in the upper right hand corner of the docking station. Gas Clip Technologies recommends using a standard 58L or 116 L bottle. Below are the recommended calibration gas concentrations:

H2S: 25 ppm CO: 100 ppm O2: 18% O2 concentration

 Warning: Calibration bottle pressure must be less than or equal to 1000 PSI. Pressures above 1000 PSI can damage the docking station.

\*If planning to use different calibration gas concentrations, this will require a configuration change using "Dock Manager Software"

**Testing the Units:** Place up to four (4) activated Single Gas Clip or SGC Plus detectors into each bay. The Clip Dock has the ability to test up to 4 detectors simultaneously. Make sure that the calibration gas matches the unit type inserted. The Clip Dock can test different detectors at the same time (\*Note this will require a multi-gas blend calibration mix). To begin the test, press either the bump test button or the calibration button. A bump test will take approx twenty (25) seconds and a calibration will take one (1) minute and forty five (45) seconds. During the test, the lights will display an **ORANGE** color.

**No USB/USB Fail Indication:** If the USB is properly installed the power light will remain solid during testing. A blinking power light during testing indicates either no USB or a USB failure. A blinking light also indicates the tests are not being recorded.

**Pass/Fail Indication:** Each bay number has a corresponding visual pass/fail indicator; they are located on the top middle of the board. A successful test will result in a **GREEN** light; a failed test will result in a **RED** light. Once the Power button has displayed the final result (**GREEN** or **RED**) you can then remove the detectors.

**Documentation:** During the test, both the bump test records and the event log of each unit will be downloaded to the onboard USB memory. For more detailed information please refer to the Advanced section of the manual.

**Mass Hibernation:** The Clip Dock has the ability to hibernate up to four (4) SGC Plus detectors simultaneously. To use this feature, power on the Clip Dock, place the detectors in the bays, press and hold down the bump test button and calibration button at the same time for 2 seconds. All lights will turn orange and the power light will blink. Once complete, the unit lights will turn green for a successful hibernation and red for a failure. Please do not remove the detectors until the power light turns green. Note during this process the event logs of the individual detectors are automatically transmitted to the USB in the dock. Hibernating units will erase the event log on the instrument.

#### Troubleshooting:

**Failed Bump Test(s):** If a detector has failed a bump test make sure to check the following:

- ⚠ Check to see if any excessive dirt/debris has entered into either the sensor cavity or audible alarm cavity. If so make sure to clear these before testing
- ⚠ Check to see if any excessive dirt/debris has accumulated over the small IR communication window located on the top of the detector parallel to the top light bar
- ⚠ Check the calibration gas level. 58L bottles are "full" at 500 PSI: 116L at 1000 PSI
- ⚠ Make sure the docking station is not placed directly in very bright light. Very bright light can interfere with communication of the detector(s)
- ⚠ Re-Try the unit. If a detector has failed three (3) times please contact Gas Clip Technologies

#### Clip Dock Components:



1	Calibration Gas Port
2	USB Memory and USB Memory Cover
3	Charging Port
4	Power and Test LED's
5	IR Communication Window
6	Pressure Gage
7	Exhaust Valve

#### Maintenance

The ClipDock Bump Test Station should be examined before and after each use to ensure that all components are in operating order and undamaged.

- Ensure that the gas cylinder has adequate gas for testing purposes.
- Examine each docking cradle to ensure that each opening is free and clear of debris.
- Examine the AC power module and ensure it is undamaged and firmly connected.
- Clean the ClipDock with a soft non-static cloth.



## Specifications:

**Size:** 18.50" x 14.06" x 6.93" (47 x 35.7 x 17.6 cm)

**Warranty:** 2 Years

**Battery Type:** Rechargeable Lithium Ion

**Memory:** USB-2 GB Standard \*Note larger memory capacity can be used

**Tests Performed:** Bump Test and Calibration  
**Information Stored:** Bump/Calibration Logs, Individual Detector Event Logs, Detector and Clip Dock Firmware, and Unit Configurations

**Configuration:** Unit settings (configuration and firmware) can be programmed/upgraded via the Clip Dock.

**Gases Available:** H2S, CO, and O2

**Unit Compatibility:** Works only with Single Gas Clip and SGC Plus detectors

**Testing Capacity:** Four (4) detectors simultaneously

**Calibration Gas:** Compatible with 58L or 116L bottles; \*Larger bottle configurations available contact GCT for further details\*

## Advanced:

This section contains instructions for advanced features of the docking station:

- Accessing the detector bump logs and event logs.
- Configuration programming for both the detectors and Clip Dock.
- Firmware programming for both the detectors and Clip Dock.


Accessing the USB data: There are two (2) methods for retrieving data from your Clip Dock USB memory, outlined below:

SGC Dock Manager Functionality	Manual USB
-Retrieve event logs and bump test logs	-Retrieve event logs and bump test logs
-Program configuration files for both detectors and Clip Dock	
-Upload Firmware Upgrades for both SGC Units and Clip Dock	

*\*For more information about the SGC Dock Manager, please refer to the SGC Dock Manager Quick Reference Guide\*.*

The section below will cover retrieving data manually by removing the USB from the Clip Dock and inserting it into a computer:

Once you have manually accessed the USB through a computer you will see up to 3 folders: Logs, Firmware, and Config. When accessing the USB directly only the Logs folder will apply, use caution when accessing other folders as they contain files that can only be changed through the SGC Dock Manager Software.

 **Caution:** Do not delete any files from the USB as the Clip Dock does not store this information internally outside of the USB.

## Logs Folder

The ClipDock is designed to automatically collect the results of each bump test for each device. In addition, it will download the detector event log. All detector event logs will be stored in the folder labeled SGC and all test logs will be stored in the TS-SGC folder. Each time a detector is tested it will transmit the entire event log up to 10 events to the USB memory. These events are saved as individual logs. It will be common for a detector to have multiple event log files stored on the USB. Individual event logs will be organized inside the SGC folder by the serial number. The serial number format is in the form of PGYY123456 (where P=Product code, G=gas type, YY=year, and 123456 is the 6-digit serial number). The logs will be stored in logs / SGC / PGYY / (serial / 512) / [fullserial#]

Every bump test and calibration performed on the Test Station is stored into the file named ts-sgc.csv, inside the TS-SGC folder. This file follows a specific format so that it can later be parsed into a database or Excel format for further manipulation and storage. You can then access the CSV file containing the test results. There are multiple lines in every test report. We will illustrate how to read this report line by line.

The first line is for the test station and the overall results for each test:

Date: Date and Time of Test

Test: Type of Test (Calibration, Bump Test, Turn Off (for SGC +))

Test Station: Model Number

Serial Number: Individual serial number for docking station

Overall Result: Pass/Fail

Dock F/W version: Docking station firmware version

Dock H/W version: Docking station hardware version

Location: This field can be programmed via the SGC Dock Manager. For example unique location, etc...



The second line and third lines are unique to each detector and will appear for each test:

Bay Num: 1,2,3,4 these correspond with the matching Unit numbers on the test station

Detector: Single Gas Clip or Single Gas Clip + (SGC Plus)

Serial: Serial Number for each detector

Result: Pass/Fail

Unit F/W Version: Firmware version of the individual detector

Audio: Pass/Fail

Visual: We do not test the visual alarm during the test; this will always display an X. Visual alarms can be verified with the daily self test.

Num Sensors: Number of sensors in the instrument, this should always display 1

Show Sensor Readings, Bump Flash Disabled, and

Hide Clock: True if enabled; False if not enabled

User ID: Unique programmable 6 digit number

Self Test Interval: Default is 20 hours; this option can be changed via IR Link or via SGC Dock Manager

The Third line(s) are for each sensor on the detector.

Sensor: Sensor Type (H2S, CO, or O2)

Result: Pass/Fail

Reading: Peak unit reading during the test in ppm

Bottle Lot #, Bottle Expiry: Both fields can be programmed via SGC Dock Manager

Bottle Concentration: Default settings can be found and programmed via SGC Dock Manager

High Alarm, Low Alarm: Alarm settings of the individual unit

Calibration Interval and Bump Test Interval: Intervals of the individual detector

Bump Test Due and Calibration Test Due: Number of days unit scheduled test is due

For any questions please feel free to contact your local Gas Clip Technologies representative or contact us directly at 877-525-0808.

## Contact Us

Gas Clip Technologies, Inc.

1805 Owen Court, Suite 119

Mansfield, Texas 76063-4232 USA

Toll-Free: +1-877-525-0808

Or, e-mail GCT at [info@gascliptech.com](mailto:info@gascliptech.com).

Please visit us at [www.gascliptech.com](http://www.gascliptech.com).

**Gas Clip Technologies, Inc. © 2011**

**All Rights Reserved.**

## Limited Warranty

Limited warranty and limitation of liability: Gas Clip Technologies ("GCT") warrants this product to be free from defects in material and workmanship under normal use and service for a period of two years beginning upon the date of purchase. This warranty extends only to the sale of new and unused products to the original buyer. GCT's warranty obligation is limited, at GCT's option, to refund of the purchase price, repair, or replacement of a defective product that is returned to a GCT authorized service center within the warranty period. In no event shall GCT's liability hereunder exceed the purchase price actually paid by the buyer for the product. This Warranty does not include: (1) Routine replacement of parts due to the normal wear and tear of the product arising from use. (2) Any product which in GCT's opinion has been misused, altered, neglected or damaged by accident or abnormal conditions of operation, handling, or use. (3) Any damage or defects attributable to repair of the product by any person other than the authorized dealer, or installation of unapproved parts or gas cylinders on or in the product. The obligations set forth in this warranty are conditional on: (1) Proper storage, installation, use, maintenance, and compliance with the user's manual instructions and any other applicable recommendations of GCT. (2) The buyer promptly notifying GCT of any defect and, if required, promptly making the product available for correction. No goods shall be returned to GCT until receipt by the buyer of instructions from GCT. (3) The right of GCT to require that the buyer provide proof of purchase such as the original invoice, bill of sale or packing slip to establish that the product is within the warranty period. The buyer agrees that this warranty is the buyer's sole and exclusive remedy and is in lieu of all other warranties, express or implied, including but not limited to any implied warranty or merchantability or fitness for a particular purpose. GCT shall not be liable for any special, indirect, incidental, or consequential damages or losses, including loss of data, whether arising from breach of warranty or based on contract, tort, or reliance on any other theory. Some countries or states do not allow limitation of the term of an applied warranty, or exclusion or limitation of incidental or consequential damages, the limitations and exclusions of this warranty may not apply to every buyer. If a court of competent jurisdiction holds any provision of this warranty invalid or unenforceable, such holding will not affect the validity or enforceability of any other provision.